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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,502	01/23/2004	Noboru Okuzono	OSP-15514	5225

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EXAMINER

OSORIO, RICARDO

ART UNIT PAPER NUMBER

2673

DATE MAILED: 03/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/762,502

Applicant(s)

OKUZONO ET AL.

Examiner

RICARDO L OSORIO

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12-23-2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 3,4 and 7-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 3,4 and 7-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>03072005</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. A full translation of the same Soichi (09015560) reference used for rejecting claims 3 and 4 in the first Office Action is being provided by the examiner to address the new claim limitations and new claims, while maintaining the opinion expressed in said first Office action.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 3-4, and 7-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Soichi (09015560).

Regarding claim 3, Soichi teaches of a liquid crystal display device (Fig. 1, reference character 11) comprising pixels equipped with a liquid crystal cell (Fig. 1, reference character 23) and a switch element (Fig. 1, reference character 25), which are arranged at positions where scan lines and data lines intersect (see Fig. 1, reference characters 27 and 29), a data line drive circuit for supplying from said data line and said switch element to said liquid crystal cell a write signal corresponding with image data (Fig. 1, reference character 12 and paragraph 37), a control circuit for inverting a polarity of said write signal after every plurality of scan lines (Fig 1, reference characters 16 and/or 17, page 12, paragraph 15, line 3, page 13, paragraph 19, lines 1-5, and page 14, paragraph 22, lines 5-7), and a scan line drive circuit which supplies a drive signal to said scan lines and switches said switch elements ON and OFF (Fig. 1, reference

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character 13 and paragraph 20, lines 5-8) while maintaining a constant horizontal scanning period (see Fig. 2, shift clock XYCLK. Note that the phrase “constant horizontal scanning period” is overly broad and is interpreted by examiner as having a constant height or amplitude, and also as constantly maintaining the same recurrent scanning periods every three scan lines, for example, T1T1T2, T1T1T2,..., as in Fig. 2) so that, of the plurality of scan lines to which is supplied a write signal of a same polarity, in following scan lines other than those scan lines where the polarity of said write signal is inverted, said drive signal is supplied for a period of time that is shorter, by a predetermined amount of time, than a time for which said drive signal is supplied to scan lines where the polarity of said drive signal is inverted (see Fig. 2, page 8, paragraph 5, lines 18-31, and paragraph 23, lines 6-14).

Regarding claim 4, Soichi teaches that said scan line drive circuit (Fig. 1, reference character 13) adjusts a period for which said drive signal is supplied (Fig. 1, reference character XYCLK and paragraph 17), in accordance with an output enable signal (Fig. 1, reference character XYCLK) for controlling whether or not to supply said drive signal to said scan line (see paragraph 20, lines 1-8).

Regarding claim 7, further, Soichi teaches of a liquid crystal display device (Fig. 1, reference character 11) comprising a plurality of pixels (Fig. 1, reference characters 23 and 25), a pixel being located where scan lines and data lines intersect (see Fig. 1, reference characters 27 and 29), each said pixel comprising a liquid crystal cell (Fig. 1, reference character 23) and a switching element (Fig. 1, reference character 25), a data line drive circuit supplying a write

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signal corresponding with image data (Fig. 1, reference character 12 and paragraph 37), a control circuit providing a polarity inversion of said write signal after a predetermined plurality of scan lines (Fig 1, reference characters 16 and/or 17, page 12, paragraph 15, line 3, page 13, paragraph 19, lines 1-5, and page 14, paragraph 22, lines 5-7), and means for supplying a drive signal to said scan lines for switching said switch elements to first and second positions (Fig. 1, reference character 13 and paragraph 20, lines 5-8) while maintaining a constant horizontal scanning period (see Fig. 2, shift clock XYCLK. Note that the phrase “constant horizontal scanning period” is overly broad and is interpreted by examiner as having a constant height or amplitude, and also as constantly maintaining the same recurrent scanning periods every three scan lines, for example, T1T1T2, T1T1T2,..., as in Fig. 2) so that, of the plurality of scan lines to which is supplied a write signal of a same polarity, in following scan lines other than those scan lines where the polarity of said write signal is inverted, said drive signal is supplied for a period of time that is shorter, by a predetermined amount of time, than a time for which said drive signal is supplied to scan lines where the polarity of said drive signal is inverted (see Fig. 2, page 8, paragraph 5, lines 18-31, and paragraph 23, lines 6-14).

Regarding claim 8, further, Soichi teaches of means to permit a precharging of drain lines for said write signal during those scan lines when the polarity of said write signal is first inverted (paragraph 8, lines 1-5 and 11-14, and paragraph 23, lines 1-12).

Regarding claim 9, further, Soichi teaches that said means for supplying said drive signal provides an output enable signal (Fig. 1, reference character XYCLK) for controlling whether or not to supply said drive signal to said scan line (see paragraph 20, lines 1-8).

Regarding claim 10, further, Soichi teaches that said shorter period is achieved by a correction to a clock signal (Fig. 1, reference character XYCLK) used to activate gate lines of said switching elements in a scan line (see paragraph 17, paragraph 20, lines 1-11, and paragraph 23, lines 6-14).

Regarding claim 11, further, Soichi teaches that said means for supplying said drive signal receives an input representing an adjustment for a time delay, said adjustment being selected to reduce at a difference of brightness between scan lines (paragraph 20, lines 9-11, paragraph 21, lines 6-13, and paragraph 23, lines 6-21).

Regarding claim 12, further, Soichi teaches a method to reduce a difference in a brightness between scan lines (paragraph 23, lines 17-21) in a liquid crystal display device (Fig. 1, reference character 11) having a polarity inversion of write signals after a predetermined plurality of said scan lines (paragraph 22), said method comprising: providing a timing adjustment as an input into a scan line drive circuit (Fig. 1, reference character XYCLK and paragraph 17) that provides a drive signal to said scan lines for switching switch elements to first and second positions in said scan lines (Fig. 1, reference character 13 and paragraph 20, lines 1-8) while maintaining a constant horizontal scanning period (see Fig. 2, shift clock XYCLK. Note

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that the phrase “constant horizontal scanning period” is overly broad and is interpreted by examiner as having a constant height or amplitude, and also as constantly maintaining the same recurrent scanning periods every three scan lines, for example, T1T1T2, T1T1T2,..., as in Fig. 2) so that, of the plurality of scan lines to which is supplied a write signal of a same polarity, in following scan lines other than those scan lines where the polarity of said write signal is inverted, said drive signal is supplied for a period of time that is shorter, by a predetermined amount of time, than a time for which said drive signal is supplied to scan lines where the polarity of said drive signal is inverted (see Fig. 2, page 8, paragraph 5, lines 18-31, and paragraph 23, lines 6-14).

Regarding claim 13, Soichi teaches that said liquid crystal display device precharges drain lines for said write signal as an initial operation for those scan lines in which the polarity of said write signal is inverted (paragraph 8, lines 1-5 and 11-14, and paragraph 23, lines 1-12).

Regarding claim 14, Soichi teaches that said drive signal provides an output enable signal (Fig. 1, reference character XYCLK) for controlling whether or not to supply said drive signal to said scan line (see paragraph 20, lines 1-8).

Regarding claim 15, Soichi teaches that said shorter period is achieved by a correction to a clock signal (Fig. 1, reference character XYCLK) used to activate gate lines of said switching elements in a scan line (see paragraph 17, paragraph 20, lines 1-11, and paragraph 23, lines 6-14).

***Response to Arguments***

4. Applicant's arguments regarding claims 3 and 4 filed 12/23/2004 have been fully considered but they are not persuasive.

First, regarding claim 3, applicant argues that "in contrast to Soichi, the present invention does not change the timing interval for respective scan intervals. Rather, the present invention clearly differs by maintaining a constant horizontal scanning period".

Examiner disagrees because the new added limitation "maintaining a constant horizontal scanning period" is overly broad. As mentioned in the above rejection, this limitation is interpreted by examiner as having horizontal scanning periods with constant height or amplitude, and also as constantly maintaining the same recurrent horizontal scanning periods for every three scan lines, for example, T1T1T2, T1T1T2,...(see Soichi, Fig. 2, reference character XYCLK).

Then, regarding claim 4, applicant argues that Soichi does not teach or suggest the specific embodiment in which an output enable signal is derived that controls whether or not to supply the drive signal to the scan line.

Examiner disagrees because Soichi indeed discloses an output enable signal (Fig. 1, reference character XYCLK and paragraph 17) that controls whether or not to supply the drive signal to the scan line (see Soichi, paragraph 20, lines 1-8).



5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ricardo L. Osorio whose telephone number is 703 305-2248. The examiner can normally be reached on Monday through Thursday from 7:00 A.M. to 5:30 P.M. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala whose telephone number is 703 305-4938.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

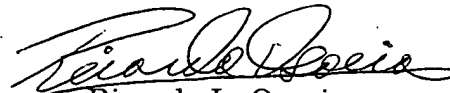
or faxed to:

703 872-9306 (for Technology Center 2600 only)

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Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,  
Arlington, VA, Sixth Floor (Receptionist).

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ricardo L. Osorio

Examiner

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RLO

March 19, 2005